

ABSTRACT

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Light emitted from a semiconductor laser (1) is split by a diffractive optical element (3a) into a main beam and sub-beams.

5 The diffractive optical element (3a) is divided into four regions by a straight line parallel to a tangential direction of a disc (7) and a straight line parallel to a radial direction of the disc (7). A phase of grating in two regions arranged diagonally and a phase of grating in the other two regions arranged

10 diagonally are different from each other by  $\pi$ . A focused spot of the main beam and focused spots of the sub-beams are located on the same track. A focusing error signal is detected by a differential astigmatism method, using the main beam and the sub-beams.